OPINIONS AND DECLARATIONS RENDERED BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E. Secretary to the Commission

VOLUME 11. Part 20. Pp. 301-320

OPINION 370

Validation under the Plenary Powers of the generic name Archaeocidaris M^cCoy, 1844 (Class Echinoidea) by the suppression under the same Powers of the generic name Echinocrinus Agassiz (J.L.R.), 1841



LONDON:

Printed by Order of the International Trust for Zoological Nomenclature

and

Sold on behalf of the International Commission on Zoological Nomenclature by the International Trust at its Publications Office 41, Queen's Gate, London, S.W.7

1955

Price Ten Shillings

(All rights reserved)

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE **RULING GIVEN IN OPINION 370**

The Officers of the Commission

Honorary Life President: Dr. Karl Jordan (British Museum (Natural History), Zoological Museum, Tring, Herts., England)

President: Professor James Chester Bradley (Cornell University, Ithaca, N.Y., U.S.A.) (12th August 1953)

Vice-President: Senhor Dr. Afranio do Amaral (Sao Paulo, Brazil) (12th August 1953)

Secretary: Mr. Francis Hemming (London, England) (27th July 1948)

The Members of the Commission

(Arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology)

Professor H. Boschma (Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands) (1st January 1947)

Senor Dr. Angel Cabrera (Eva Peron, F.C.N.G.R., Argentina) (27th July 1948) Mr. Francis Hemming (London, England) (27th July 1948) (Secretary)

Dr. Joseph Pearson (Tasmanian Museum, Hobart, Tasmania, Australia) (27th July 1948)

Dr. Henning Lemche (Universitetets Zoologiske Museum, Copenhagen, Denmark) (27th July 1948)

Professor Teiso Esaki (Kyushu University, Fukuoka, Japan) (17th April 1950) Professor Pierre Bonnet (Université de Toulouse, France) (9th June 1950) Mr. Norman Denbigh RILEY (British Museum (Natural History), London) (9th

June 1950) Professor Tadeusz Jaczewski (Institute of Zoology, Polish Academy of Sciences,

Warsaw, Poland) (15th June 1950)

Professor Robert Mertens (Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany) (5th July 1950)
Professor Erich Martin HERING (Zoologisches Museum der Humboldt-Universität

zu Berlin, Germany) (5th July 1950)

Senhor Dr. Afranio do AMARAL (S. Paulo, Brazil) (12th August 1953) (Vice-President)

Professor J. R. DYMOND (University of Toronto, Toronto, Canada) (12th August 1953)

Professor J. Chester Bradley (Cornell University, Ithaca, N.Y., U.S.A.) (12th August 1953) (President)

Professor Harold E. Vokes (Johns Hopkins University, Baltimore, Maryland, U.S.A.) (12th August 1953)

Professor Béla HANKÓ (Mezőgazdasági Muzeum Budapest, Hungary) (12th August 1953)

Dr. Norman R. Stoll (Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.) (12th August 1953)
Mr. P. C. Sylvester-Bradley (Sheffield University, Sheffield, England) (12th

August 1953)

Dr. L. B. Holthuis (Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands) (12th August 1953)

OPINION 370

VALIDATION UNDER THE PLENARY POWERS OF THE GENERIC NAME "ARCHAEOCIDARIS" MCCOY, 1844 (CLASS ECHINOIDEA) BY THE SUPPRESSION UNDER THE SAME POWERS OF THE GENERIC NAME "ECHINOCRINUS" AGASSIZ (J.L.R.), 1841

RULING:—(1) Under the Plenary Powers the generic name *Echinocrinus* Agassiz (J.L.R.), 1841, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

- (2) The under-mentioned generic name is hereby placed on the *Official List of Generic Names in Zoology* with the Name No. 893:—*Archaeocidaris* M^cCoy, 1844 (gender: feminine) (type species, by monotypy: *Cidaris urii* Fleming, 1828).
- (3) The under-mentioned specific name is hereby placed on the Official List of Specific Names in Zoology with the Name No. 514:—urii Fleming, 1828, as published in the combination Cidaris urii (specific name of type species of Archaeocidaris M^cCoy, 1844).
- (4) The under-mentioned generic name is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology with the Name No. 309:—Echinocrinus Agassiz (J.L.R.), 1841, as suppressed under the Plenary Powers under (1) above.

I.—THE STATEMENT OF THE CASE

The present *Opinion* is concerned with the second of the eight cases relating to disputed Echinoderm names submitted to the International Commission on Zoological Nomenclature

by the late Dr. Th. Mortensen (*Universitetets Zoologiske Museum*. Copenhagen) under cover of a letter dated 17th November 1932. The arguments in regard to these cases are set out in a paper by Dr. Mortensen entitled "A Vote on some Echinoderm Names", which had been published a month earlier (Mortensen. October 1932, Ann. Mag. nat. Hist. (10) 10:345-368). present application is concerned with the names Echinocrinus Agassiz (J.L.R.), 1841, and Archaeocidaris M^cCov, 1844. The point at issue was a simple one. In 1841 Agassiz erected the nominal genus Echinocrinus for Cidaris urii Fleming, 1828, and two other species, all of which Agassiz believed to be Crinoids. In 1844 M^cCoy, when discussing the genus Echinocrinus, mentioned incidentally that in his manuscripts he had long distinguished C. urii "under the name of Archaeocidaris". In the following year (1845) Murchison, Verneuil and Kayserling recognised that these fossils were Echinoids and not Crinoids and expressed a preference for the name Archaeocidaris over the name Echinocrinus. They did not, however, actually adopt M^cCoy's name Archaeocidaris. But it was not very long before the manifest unsuitability of the name Echinocrinus for a genus of Echinoids led to the general adoption of the name Archaeocidaris. The object of the application submitted by Dr. Mortensen and his colleagues was to secure a legal basis for the continued use of the name Archaeocidaris.

2. As has been explained in paragraphs 1 and 2 of *Opinion* 206 (1954, *Ops. Decls. int. Comm. zool. Nomencl.* 3: 319—338) relating to the name *Diadema* Gray, 1825 (a case which was submitted jointly with the present case), an extensive canvas of the views of active workers in the Echinoderms¹ had been undertaken by Dr. Mortensen before the present case was submitted to the International Commission. Of the thirty-nine (39) specialists who had taken part in this consultation, thirty-six (36) supported the proposals submitted to the Commission, the specialists taking this view being:—Bather; Brighton; A. H. Clark; H. L. Clark; Cottreau; Currie; Deichmann; Diakonov; Döderlein; Ekman; Faas; Fedotov; Fisher;

¹ The full addresses of the specialists who took part in this consultation have been given in paragraph 2 of *Opinion* 206 (*Diadema*), the first *Opinion* to be rendered by the Commission on any of the cases submitted to it in 1932 by Dr. Mortensen and his colleagues.

Goto; Gregory; Grieg; Hawkins; Hecker; Heding; Hérouard; Jackson; Klinghardt; Lieberkind; Mortensen; Nobre; Ohshima; Panning; Ravn; Reichensperger; Schmidt; Spencer; Stefanini; Valette; Vaney; Wanner; Yakovlev. Of the remaining three (3) specialists, one (1) (Lambert) believed that the name *Archaeocidaris* M^CCoy was valid under the *Règles*, and two (2) (Gislén; von Hofsten) did not sign the application submitted to the Commission, expressing their fear that the adoption of the proposals in regard to the name *Echinocrimus* might lead to the rejection of too many names on the ground of inappropriateness.

II.—THE SUBSEQUENT HISTORY OF THE CASE

3. Consultation in 1932 with palaeontologists of the United States Geological Survey: In December 1932 the then Secretary (the late Dr. C. W. Stiles) reported Dr. Mortensen's application to the Commission in Circular Letter 229. On 20th December of that year, he wrote also to the Director of the United States Geological Survey, expressing the hope that arrangements might be made for these proposals to be examined by the palaeontologists of the Survey. On 19th January 1933, the Director replied, forwarding five comments by members of the staff, of which one was signed by two workers. These comments, in so far as they relate to the present case, were as follows:—

(a) Comment by L. W. Stephenson and C. Wythe Cooke:

I am in favor of codifying names concerning the strict validity of which there may be some question, if they have been in generally accepted use for long periods, but when it can be shown clearly that some other name has priority over a later more generally used name . . . is there not a danger of adding to, rather than subtracting from, the confusion? Will not some authors accept the rulings of the International Commission, while others will continue stoutly to maintain the validity of the names having priority? Furthermore, will not such rulings encourage a flood of demands for suspension of the Rules?

(b) Comment by Lloyd G. Henbest:

Dr. Mortensen's petition to conserve and restore certain Echinoderm names seems to be reasonable, except in the cases of . . . [Here are mentioned certain names with which the present *Opinion* is not concerned.].

If the original presentations of the names *Protoechinus* and *Eriechinus* were beneath the standards of their times and especially if the type specimens are very poor fossils, I believe that any excuse for rejecting the names should be taken. Dr. Mortensen's petition does not make it entirely clear that such is the situation; therefore his action is subject to debate and is possibly unjustified.

(c) Comment (dated 6th January 1933) by John B. Reeside, jr. :

I see no particular objection to placing all of the names on the *List* of established names.

(d) Comment by Edwin Kirke (referring to Dr. Reeside's comment):

I concur, except in the case of Diadema. [See Opinion 206.]

(e) Comment (dated 16th January 1933) by W. P. Woodring:

I am not familiar with the usage of these Echinoderm names, but as a general principle—other things being equal—I am in favor of special protection for names of long-standing usage that are being threatened.

- 4. Report to the Commission by Dr. C. W. Stiles in March 1955: In December 1933 Dr. Stiles reported to the Commission (in Circular Letter 245) the comments received earlier in that year from the palaeontologists of the Geological Survey. In March 1935 Dr. Stiles reported to the Commission (in Circular Letter 291) that he had received no further comments on this or the other proposals submitted by Dr. Mortensen and his colleagues, and suggested that these proposals should be considered by the Commission when it met at Lisbon in September of that year.
- 5. Postponement of the present application at Lisbon in 1935: When the International Commission assembled at Lisbon in 1935,

the Secretary was absent through ill-health and the documents relating to the present case were not available. The Commission accordingly found itself unable to deal with this application at that Session.

- 6. Registration of the present application: At the time of the transfer of the Secretariat to London, following the election of Mr. Francis Hemming to be Secretary to the International Commission in succession to Dr. Stiles, the papers relating to this and other cases were transferred to his care in 1938. It was then decided, as a temporary measure to register as a single unit the complex of applications submitted in Dr. Mortensen's paper "A Vote on some Echinoderm Names", and the Registered Number Z.N.(S.) 18 was allotted to that complex. When later it was decided to deal separately with each of the foregoing applications, the Registered Number Z.N.(S.) 320 was allotted to the present case.
- 7. Wartime difficulties: The re-organisation of the Secretariat consequent upon its transfer to London and the arrangements required to be made for the provision of a small fund to enable the Commission to start its work at its new headquarters had barely been completed when in September 1939 the outbreak of war in Europe led to the evacuation of the records of the Commission from London to the country as a precaution against the risk of destruction through air raids. The Secretariat of the Commission in London was re-opened in 1942 and steps were immediately taken to establish the Bulletin of Zoological Nomenclature as a means for bringing to the attention of zoologists applications submitted to the Commission for decision. Work was at once started on those of the outstanding applications which were either sufficiently advanced to permit of their being published forthwith or with the authors of which it was possible for the Secretariat, notwithstanding the war then in progress, to communicate by post. The occupation of Denmark by German Armed Forces made it impossible, however, for the Secretariat at that time to communicate with Dr. Mortensen and it was accordingly impossible, until after the close of hostilities in Europe in 1945, to make any progress on this and the other

cases of Echinoderm nomenclature which he had submitted to the Commission.

- 8. Conference between Mr. Hemming and Dr. Mortensen in London in 1946: In the summer of 1946 Dr. Mortensen took advantage of the restored opportunities for foreign travel made possible by the Liberation of Denmark, to visit London, largely for the purpose of discussing with Mr. Hemming the arrangements to be made for the further consideration of this, and his other, applications by the International Commission. It was then agreed that, as a first step, Dr. Mortensen should prepare, and should furnish to Mr. Hemming as quickly as possible, separate applications of a rather fuller kind in regard to each of the outstanding cases which in 1932 he had submitted collectively in his paper "A Vote on some Echinoderm Names" (paragraph 1 of the present *Opinion*).
- 9. Submission by Dr. Mortensen of a revised application in 1947: In conformity with the arrangements made at the Conference held in 1946 (paragraph 8 above), Dr. Mortensen on 14th June 1947 submitted the following revised application relating to the present case:—

Proposed Suspension of the "Règles" for "Archaeocidaris" M^cCoy, 1844 (Class Echinoidea, Order Cidaroidea)

By TH. MORTENSEN

(Universitetets Zoologiske Museum, Copenhagen)

In December 1932 I submitted to the International Commission on Zoological Nomenclature a request that under their Plenary Powers they should validate certain generic names in the Phylum Echinodermata which under the *Règles Internationales* were either invalid or had, as their type species, other species than those universally attributed to them. In each case I was of the opinion that greater confusion than uniformity would clearly result from the strict application of the *Règles*. In this view I was supported by a large number of the leading specialists in this group. Full particulars of these cases were given in a paper entitled "A Vote on some Echinoderm Names" (1932, *Ann. Mag. nat. Hist.* (10) 10: 345—368). Owing to the illhealth of the then Secretary of the International Commission, and for

other reasons, no progress was made with any of these applications except that of *Luidia* Forbes, which has been settled by the Commission in *Opinion* 129. The need for decisions on these cases has increased in urgency in the interval elapsed since 1932 and I now ask the Commission to take each of these cases into immediate consideration.

Discussion of the case:

Bather, in his paper "Echinocrinus versus Archaeocidaris" (1907, Ann. Mag. nat. Hist. (7) 20: 452—456), has given a very clear and complete presentation of the whole question regarding the name Archaeocidaris from which it is seen that, strictly speaking, the name Echinocrinus Agassiz (J.L.R.) (1841, Obs. sur les progres recents de l'Hist. nat. des Echinodermes. Monogr. des Echinodermes 2:15) has priority, the name Archaeocidaris MCCoy (1844, Synopsis Carbonif. Fossils of Ireland: 173) being a synonym thereof.

But it would be most unfortunate from every point of view to reject the highly appropriate name Archaeocidaris for the absolutely misleading name Echinocrinus; such a change would in no sense whatever be of any advantage to science, and would be sure to lead to great confusion. In all the main works dealing with this group of Echinoids the name Archaeocidaris has been used, e.g. Desor's Synopsis des Echinides fossiles; Zittel's Palaeontologie; Jackson's Phylogeny of Echini; Lambert and Thiéry's Essai de nomenclature raisonnée des Echinides; Mortensen's Monograph of the Echinoidea.—I. Cidaroidea.

I therefore ask the International Commission on Zoological Nomenclature, acting under the Plenary Powers conferred upon them by the International Congress, under suspension of the Règles to place the name Archaeocidaris M^CCoy, 1844, on the Official List of Generic Names in Zoology, with Cidaris urii Fleming, 1828 (Fleming, 1828, Hist. Brit. Anim.: 478) as the type species.

In my paper "A Vote on some Echinoderm Names" cited above, I gave particulars of the large number of specialists (36) who had indicated their support for the present proposals.

10. Issue of Public Notices in 1947: On 14th November 1947, Public Notice of the possible use by the International Commission of its Plenary Powers in the present case was given in the manner prescribed by the Ninth International Congress of Zoology, Monaco, 1913. The issue of these Public Notices elicited no objection to the action proposed to be taken in this case.

11. Decision on procedure taken at Paris in 1948: The present application was considered by the International Commission on Zoological Nomenclature at the Fourteenth Meeting of its Paris Session held at the Sorbonne on Monday, 26th July 1948 at 2030 hours. The following is an extract from the Official Record of the Proceedings of the International Commission (1) summarising the points made in the discussion at the foregoing meeting and (2) setting out the decision then reached by the Commission in regard to this case (Paris Session, 14th Meeting, Conclusion 33) (1950, Bull. zool. Nomencl. 4:515—516):—

IN DISCUSSION the view was expressed that, although the application had clearly established that the name Echinocrinus was inappropriate and that from this point of view the name Archaeocidaris was to be preferred, no clear evidence had been advanced in support of the argument that actual confusion was likely to ensue if the Règles were allowed to take their course in this case and the availability of Echinocrinus Agassiz formally recognised. On the other hand attention was drawn to the statement at the conclusion of the late Commissioner Bather's paper (submitted by Dr. Mortensen as part of his application) that already by 1907 the generic name Archaeocidaris had given its name to a family (ARCHAEOCIDARIDAE). It would be helpful if, before a decision were taken on this application, further information could be obtained on the nature and extent of the confusion to be expected if the name Archaeocidaris were now to be relegated as a synonym of Echinocrinus. An application supported by virtually the entire body of interested specialists in all parts of the world was not to be lightly placed on one side.

THE COMMISSION agreed :—

- (1) that, before a decision was taken on the application submitted by Dr. Th. Mortensen (Denmark) on his own behalf and on that of a large group of interested specialists that the Commission should use their Plenary Powers (a) to suppress the generic name *Echinocrinus* Agassiz, 1841, and (b) to validate the generic name *Archaeocidaris* M^CCoy, 1844 (type species, by monotypy: *Cidaris urii* Fleming, 1828) (Class Echinoidea, Order Cidaroidea), it was desirable to obtain further informatjon regarding the nature and extent of the confusion apprehended if in this case the *Règles* were permitted to take their course, *Echinocrinus* Agassiz, 1841, replacing the name *Archaeocidaris* M^CCoy, 1844;
- (2) to invite the Secretary to the Commission to communicate the foregoing conclusion to Dr. Mortensen and, in consultation with him and other interested specialists, to prepare

for the consideration of the Commission a Report setting out the views expressed by such specialists on the issue referred to in (1) above, in order that, in the light of the views so expressed, the Commission might reach a final decision on the foregoing application.

12. Re-issue of Public Notice in 1952 and issue of an appeal to specialists to furnish advice on the present case: In the period between the close of the Paris Congress and the summer of 1950, the entire resources of the Office of the Commission were devoted to the preparation and publication of the Official Records of meetings held in 1948. The publication in these Official Records of the interim decision taken in Paris in regard to the present case elicited no comments, and in 1951 it was therefore decided again to give Public Notice of the possible use of the Plenary Powers in the present case. It was decided that the issue of this Notice should be accompanied by a brief note by the Secretary summarising the action recommended by Dr. Mortensen and his colleagues and appealing to interested specialists to furnish statements of their views. Accordingly, under the revised procedure prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, Bull. zool. Nomencl., 4:51-56) the supplementary Public Notice so decided upon was given on 15th April 1952 (a) in Double-Part 7/8 of volume 7 of the Bulletin of Zoological Nomenclature (the Part in which the note by the Secretary referred to above was published) and (b) to the other prescribed serial publications. The note by the Secretary so published (Bull. zool. Nomencl. 7: 217—218) was as follows:—

Case 24: Proposed use of the Plenary Powers to suppress the generic name "Echinocrinus" Agassiz, 1841, and to validate the name "Archaeocidaris" MCCoy, 1844 (Class Echinoidea)

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

(Extract from a paper entitled "Preliminary Report on Twenty-Eight individual nomenclatorial problems remitted by the International Commission on Zoological Nomenclature for special investigation: Request to specialists for advice"

56. The proposal that the International Commission on Zoological Nomenclature should use its Plenary Powers to suppress the generic

name Echinocrinus Agassiz, 1841, for the purpose of validating the name Archaeocidaris MCCoy, 1844 (Class Echinoidea) was one of seven cases submitted to the Commission by Dr. Th. Mortensen in 1932 jointly with that of *Encrinus* Schulze, 1760, discussed in paragraphs 54—55 above. As in the case of the name Encrinus, an extensive consultation between leading specialists in different parts of the world had taken place in regard to the proposed validation of the name Archaeocidaris MCCoy, prior to the application in regard to that name being submitted to the Commission. Of the thirty-nine specialists who took part in that consultation thirty-six had supported the submission of this application to the Commission, one had expressed the view that Archaeocidaris MCCoy, 1844, could be used without invoking the use of the Plenary Powers, while two had voted against the proposal on grounds unconnected with the merits of this particular case (see Mortensen, 1932, Ann. Mag. nat. Hist. (10)10: 345). in the case of the name Encrinus, the Commission did not find it possible to deal with this proposal before the outbreak of the World War in 1939. After the close of that war, this application was advertised in 1947 in the serial publications Science and Nature as a case involving the possible use of the Plenary Powers. No objection to the action proposed was elicited as the result of this advertisement.

57. When the International Commission considered this application at its Session held in Paris in July, 1948, it took the view that a further consultation with specialists regarding the nature and extent of the confusion to be expected if the name Echinocrinus Agassiz were to be substituted for the name Archaeocidaris MCCoy was desirable before a decision was reached on this application. In the original application to the Commission the thirty-six specialists who had joined in submitting this application had based their proposal on two grounds: (1) The name Echinocrinus had been given by Agassiz to the genus concerned in the mistaken belief that the fossil species included in it were Crinoids; once it was established that these species were in fact Echinoids, the name Echinocrinus had become "absolutely misleading" and it was for this reason that this name had been dropped in favour of the thoroughly appropriate name Archaeocidaris M^CCoy; (2) All the main authorities who had published on this genus (Desor, Zittel, Jackson, Lambert & Thiéry, Mortensen) had used the name Archaeocidaris and on this account also the substitution for that name of the name Echinocrinus Agassiz would be calculated to cause confusion. Of the foregoing arguments, clearly (1) remains as valid today as at the time when it was first advanced. Argument (2) would, however, have been impaired in its force if it could be shown that in the period 1932— 1951 leading authorities had published important works in which they had used the name Echinocrinus Agassiz in place of the name Archaeocidaris M^CCov, particularly if it could be shown that any of those authors who regarded this genus as the type genus of a family had changed the name of that family from ARCHAEOCIDARIDAE to ECHINOCRINIDAE.

- 58. In order that a final decision may be taken by the International Commission on this application with as little further delay as possible, specialists in the Echinoidea, including those specialists who took part in submitting the original application, are requested to be so kind as to notify to the Commission their views on the question set out in the preceding paragraph in regard to the proposal that the Plenary Powers should be used to validate the use of the generic name *Archaeocidaris* M^CCoy, 1844, in place of the name *Echinocrinus* Agassiz, 1841.
- 13. Comments received in response to the Public Notice issued in April 1952: The Public Notice issued in the present case, in April 1952 concurrently with Mr. Hemming's appeal to specialists for advice elicited comments from two specialists, each of whom supported the action recommended by Dr. Mortensen. The specialists concerned were:—(1) Professor Dr. H. Engel (Zoologisch Museum, Amsterdam, The Netherlands); (2) Dr. Austin H. Clark (Smithsonian Institution, U.S. National Museum, Washington, D.C., U.S.A.), one of the original coapplicants in the present case. The communications so received are given in the immediately following paragraphs². No objection to the use of the Plenary Powers for the purposes recommended by Dr. Mortensen was received from any source.
- 14. Support received from Professor Dr. H. Engel (Zoologisch Museum, Amsterdam, The Netherlands): On 17th April 1952 Professor Dr. H. Engel (Zoologisch Museum, Amsterdam, The Netherlands) addressed a letter to the Commission, commenting upon a number of cases dealt with in the then just published Part 7/8 of volume 7 of the Bulletin. The following is an extract from the foregoing letter of the portion relating to the present case:—"It is my opinion that Archaeocidaris (Case 24, p. 217) (Z.N.(S.) 320) should be validated".
- 15. Support received from Dr. Austin H. Clark (Smithsonian Institution, U.S. National Museum, Washington, D.C., U.S.A.):

² After the close of the present case a note of support (dated 11th April 1955) was received from Joseph H. Peck, Jr. (*Museum of Paleontology, University of California, Berkeley, California, U.S.A.*) which is reproduced as an Annexe to the present *Opinion*.

On 20th May 1952 Dr. Austin H. Clark (Smithsonian Institution, U.S. National Museum, Washington, D.C., U.S.A.) addressed a letter to the Commission, commenting on the cases of Echinoderm nomenclature dealt with in Part 7/8 of volume 7 of the Bulletin. The following is an extract from the foregoing letter of the portion relating to the present case:—

I recommend that Archaeocidaris MCCoy, 1884, Pholidocidaris Meek & Worthen, 1869, and Lovenechinus Jackson be placed on the List as nomina conservanda in the sense in which they are used in Mortensen's Monograph of the Echinoidea.

III.—THE DECISION TAKEN BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

16. Issue of Voting Paper V.P.(O.M.)(54)7: In May 1954 Mr. Hemming, as Secretary, prepared for the consideration of the Commission a brief note, summarising the history of the present case, and giving an account of the interim decision taken in Paris in 1948, of the action subsequently taken to secure the views of interested specialists and of the comments so elicited. This note was submitted to the Commission on 12th May 1954, together with a Voting Paper (V.P.(O.M.)(54)7), in which the Members of the Commission were invited to vote either for, or against, "the proposal relating to the name Archaeocidaris McCoy, 1844, as set out at the foot of the present Voting Paper". The draft Ruling so submitted is not reproduced here, for its terms were identical with those of the Ruling given at the head of the present Opinion.

17. The Prescribed Voting Period: As the foregoing Voting Paper was issued under the One-Month Rule, the Prescribed Voting Period closed on 12th June 1954.

- 18. Particulars of the Voting on Voting Paper V.P.(O.M.)(54)7: At the close of the Prescribed Voting Period, the state of the voting on Voting Paper V.P.(O.M.)(54)7 was as follows:—
 - (a) Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received):

Sylvester-Bradley; Lemche; Rıley; Holthuis; Hering; Dymond; Vokes; Stoll; Esaki; Hankó; Hemming; Boschma; Bradley (J. C.); Cabrera; Bonnet; Pearson;

(b) Negative Votes:

None;

(c) On Leave of Absence, one (1):

Mertens;

(d) Voting Papers not returned, two (2):

Jaczewski³; do Amaral³.

19. Declaration of Result of Vote: On 13th June 1954 Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P. (O.M.)(54)7, signed a Certificate that the Votes cast were as set out in paragraph 18 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

After the close of the Prescribed Voting Period an affirmative vote was received from each of the Commissioners here concerned: from Commissioner Jaczewski on 1st July 1954; from Commissioner do Amaral on 3rd July 1954.

- 20. Preparation of the Ruling given in the present "Opinion": On 16th March 1955 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(O.M.)(54)7.
- 21. Original References: The following are the original references for the names placed on Official Lists and Official Indexes by the Ruling given in the present Opinion:—

Archaeocidaris M^cCoy, 1844, Syn. Carbon. Foss. Ireland: 173 Echinocrinus Agassiz (J.L.R.), 1841, Mon. Echin. 2: 15 urii, Cidaris, Fleming, 1828, Hist. Brit. Anim.: 478

- 22. Family-Group-Name aspect: The application dealt with in the present *Opinion* was submitted to the Commission many years before the establishment of the *Official List of Family-Group Names in Zoology*. It was not found possible to investigate this aspect of this case prior to the submission to the Commission of Voting Paper V.P.(O.M.)(54)7. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G.)125 has been allotted.
- 23. At the time of the submission of the present application the name applicable to the second portion of a binomen was "trivial name". This was altered to "specific name" by the Fourteenth International Congress of Zoology, Copenhagen, 1953, which at the same time made corresponding changes in the titles of the Official List and Official Index of names of this category. These changes in terminology have been incorporated in the Ruling given in the present Opinion.
- 24. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International

Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

25. The present *Opinion* shall be known as *Opinion* Three Hundred and Seventy (370) of the International Commission on Zoological Nomenclature.

DONE in London, this Sixteenth day of March, Nineteen Hundred and Fifty-Five.

Secretary to the International Commission on Zoological Nomenclature

FRANCIS HEMMING

ANNEXE

Comment (dated 11th April 1955) received after the close of the present case

from JOSEPH H. PECK, Jr.

(Museum of Paleontology, University of California, Berkeley, California, U.S.A.)

I would like to say that I am very much in accord with Dr. Th. Mortensen's proposal to suppress the name *Echinocrinus* Agassiz 1841 in favor of *Archaeocidaris* MCCoy 1844.

An extensive, but not exhaustive survey of the literature (see below) shows the degree to which the name *Archaeocidaris* M^CCoy has been favored over Agassiz's name *Echinocrinus*.

Prior to the publication of "Archaeocidaris vs Echinocrinus", (Bather, 1907) Archaeocidaris had been used in seventy-five publications, while during the same period Echinocrinus was used in only seven. Between 1907 and 1932 fifteen papers listed the former and eight the latter. In the period 1932-1952 there were seventeen articles which used the name Archaeocidaris with six using the name Echinocrinus. The total number of citations for the period 1841-1952 favoring Archaeocidaris is 107, those favoring Echinocrinus twenty-one—a ratio of over five to one.

In view of this great preponderance of authors favoring Archaeocidaris, and the conclusions set forth by Mortensen, it seems to me that use of the Plenary

Powers to suppress the name *Echinocrinus* Agassiz 1841 in favour of *Archaeocidaris* MCCoy 1844 is justified.

The page references in the following bibliography are to those pages mentioning either *Archaeocidaris* or *Echinocrinus*. For the sake of brevity the citations of Jackson (1912) are not listed although they are included in the totals.

BIBLIOGRAPHY

Pro Archaeocidaris

MCCoy, F., 1844

Bernard, F., 1895. Élémentes de Paléontologie, vol. 1, pp. 261, 271, 282.

Boos, M. F., 1929. Stratigraphy and fauna of the Luta (Permian) limestone of Oklahoma and Kansas. *Jour. of Paleo.*, vol. 3, p. 294.

Branson, C. C., 1937. Stratigraphy and fauna of the Sacajawea formation, Mississippian, of Wyoming. *Jour. of Paleo.*, vol. 11, p. 652.

Clark, H. L., 1946. The Echinoderm Fauna of Australia. Carnegie Inst. of Washington Pub. 566, p. 279.

Credner, H., 1902. Elemente der Géologie, p. 462.

Cuénot, L., 1948. Echinodermes. [in *Traité de Zoologie*, Grassé, P.P., editor, vol. 11, Echinodermes, Stomocordés, Procordes.] p. 169.

Dana, J. D., 1863. Manual of Geology, pp. 160, 312.

deLapparent, A., 1906. Traité de Géologie, 5th ed. vol. 2, p. 884.

Demanet, F., 1938. Faune des Couches de passage du Dinantien au Namurien dans le synklinorium de Dinant. *Mem. Mus. Roy. d'Hist. Nat., Belgique*, no. 84, p. 42.

——, 1941. Faune et stratigraphie de L'Étage Namurien de la Belgique. Mem. Mus. Roy. d'Hist. Nat., Belgique, no. 97, p. 61.

Denizot, G., 1952. Atlas des Fossiles. 3rd Ed., Pt. 1, p. 51.

Duncan, P. M., 1891. A revision of the Genera and great groups of the Echinoidea. *Jour. Linn. Soc. London, Zool.*, vol. 23, p. 11.

Easton, W. H., 1943. The fauna of the Pitkin formation of Arkansas. *Jour. of Paleo.*, vol. 17, pp. 126, 130.

Frech, F., 1902. *Lethaea geognostica*, vol. 1, Pt. II, pp. 287, 293, 322, 681. Geikie, A., 1893. *Text-Book of Geology*, 3rd ed., p. 811.

Gignoux, M., 1933. Le Oursins Reguliers Fossiles, Grenoble Université, Faculté des Sciences Travaux de Géologie, vol. 17, 2nd fasc., pp. 16, 42.

Hawkins, H. L. 1920. The morphology and evolution of the ambulacrum in the Echinoidea Holectypodia. *Phil. Trans. Roy. Soc. London*, ser. B., vol. 209, pp. 384-385.

Jackson, R. T., 1912. Phylogeny of the Echini with a revision of Paleozoic Species. *Mem. Boston Soc. Nat. Hist.*, vol. 7, pp. 256-282, 446-449.

Jackson, R. T., 1929. Palaeozoic Echini of Belgium. Mem. Mus. Roy. d'Hist. Nat., Belgique, no. 38, pp. 11-18.

Kittl, E., 1904. Geologie der Umgebung von Sarjevo. *Jaharb. K. K. Geol. Reichst.*, vol. 53, pp. 684-685.

Langenheim, R. L. Jr., 1952. Pennsylvanian and Permian Stratigraphy in Crested Butte Quadrangle, Gunnison County, Colorado. *Bull. Amer. Assoc. Petrol. Geol.*, vol. 36, p. 566.

- Le Conte, Joseph, 1882. Elements of Geology, Rev. and enlarged, p. 395.
- Maillieux, E., 1940. Les Échinodermes du Frasnien de la Belgique. Mem. Mus. Roy. d'Hist. Nat., Belgique, no. 92, pp. 27-30.
- Mather, K. F., 1915. The Fauna of the Morrow Group of Arkansas and Oklahoma. *Bull. Dennison Univ.*, vol. 18, p. 110.
- Merla, Giovanni, 1934. Fossili del Paleozoico. Relazioni Spedizione Italiana Scientifica della De Filippi etc., ser. II, vol. 5, Pt. I, p. 257.
- MCCoy, F., 1855. Systematic Description of the British Palaeozoic Fossils. In Sedgwick, A., A synopsis of the classification of the British Palaeozoic Rocks, p. 125.
- Moore, R. C., 1948. Paleontological features of Mississippian rocks in North America and Europe. *Jour. Geol.*, vol. 56, p. 392.
- Mortensen, Th., 1928. A Monograph of the Echinoidea. Pt. I, Cidaroidea, p. 59.
 —, 1928a. Bothriocidaris and the origin of Echinoids. Vidensk. Medd. fra Dansk. naturh. Foren., Bd. 86, p. 106.
- Neaverson, E., 1928. Stratigraphical Palaeontology, p. 142.
- Nicholson, H. A., 1876. The Ancient Life History of the Earth, p. 182.
- ____, 1879. A Manual of Palaeontology. 2nd Ed., vol. 1, p. 237.
- —, and Lydekker, R., 1889. A Manual of Palaeontology. 3rd Ed., vol. 1, pp. 376-377.
- Owen, R., 1861. Palaeontology, 2nd Ed., p. 38.
- Quenstedt, A., 1852. Handbuch der Petrifaktenkunde, p. 575.
- Royo y Gomez, J., 1945. Fosiles carboniferos e infracretacicos del oriente de Cundinamarca. Servicio Geologico Nacional, Colombia, Tom. 6, p. 199.
- Sayre, Albert N., 1930. The Fauna of the Drum limestone of Kansas and Western Missouri. Bull. Univ. of Kansas, vol. 31, no. 12, p. 86.
- Schmidt, H., 1929. Tierische Leitfossilien des Karbon. Leitfossilien (G. Gurich ed.), 6th Lief., p. 87.
- Schwarzbach, M., 1949. Die fauna des Bug-Karbons, ihre stratigraphische und Palaoegeographische Bedeutung. *Palaeontographia*, Bd. 97, abt. A, p. 21.
- Swinnerton, H. H., 1947. Outlines of Palaeontology, 3rd Ed., pp. 152-153.
- Taylor, J. E., 1885. Our Common British Fossils, p. 154.
- Termier, G., and Termier, H., 1950. Invertebrates de l'Ere Primaire, Paleontologie Marocaine, Notes et Memoires No. 79, vol. 2, fas. IV, p. 99.
- Twenhofel, W. H., and Shrock, R. R., 1935. Invertebrate Paleontology, pp. 205, 211.
- Wanner, J., 1941. Neue beiträge zur Kenntnis der permeischen Echinodermen von Timor. XV. Echinoidea. *Palaeontographia*, Supp. 4, pp. 298-302.
- Zittel, K. A. von, 1895. Grundziige der Palaeontologie (Palaeozoologie), p. 184.
- —, 1927. Text-book of Paleontology. 2nd Ed., translated by Charles E. Eastman, vol. 1, p. 300.

Pro Echinocrinus

Agassiz, A. L., 1841

- Bacon, C. S., Jr., 1948. Geology of the Confusion Range, West-Central Utah. Geol. Soc. Amer. Bull., vol. 59, p. 1046.
- Branson, C. C., 1948. Bibliographic index of Permian invertebrates. Geol. Soc. Amer. Mem. 26, p. 222.

- Chronic, B. J., 1949. *Invertebrate Paleontology*, Pt. II. In Upper Paleozoic of Peru by Newell, N., Chronic, B. J., and Roberts, T. G., p. 173.
- Bather, F. A., 1907. "Echinocrinus" versus "Archaeocidaris". Ann. Mag. Nat. Hist. Ser. 7th, vol. 20, pp. 452-456.
- —, 1909. Previous history of "Eocidaris" and selection of genotype. Ann. Mag. Nat. Hist. Ser. 8th, vol. 3, p. 54.
- Geinitz, H. B., 1846. Grundriss der Versteinerungskunde. [Echinocrinus listed in index, page 532, but not on cited page.]
- Gilluly, J., 1932. Geology and ore deposits of the Stockton and Fairfield Quadrangles Utah. U.S. Geol. Surv. Professional Paper 173, p. 24.
- Girty, G. H., 1909. Paleontology of the Manzano group of the Rio Grande Valley, New Mexico. U.S. Geol. Surv., Bull. 389, pp. 50-52.
- —, 1915. Fauna of the Wewoka formation of Oklahoma. U.S. Geol. Surv. Bull. 544, p. 37.
- Keyte, I. A., Blanchard, W. G., Jr., and Baldwin, H. L., Jr., 1927. Gaptank-Wolfcamp Problem of the Glass Mountains, Texas. Jour. of Paleo., vol. 1, p. 177.
- King, R. E., 1930. The Geology of the Glass Mountains, Texas, Pt. II. Univ. of Texas Bull. no. 3042, p. 24.
- Moore, R. C., Lalicker, C. G., and Fischer, A. G., 1952. *Invertebrate Fossils*, pp. 690, 692.
- Nolan, T. B., 1935. The Gold Hill Mining District, Utah. U.S. Geol. Surv. Professional Paper 177, p. 29.
- Ransome, F. L., 1916. Some Paleozoic sections in Arizona and their correlation. *U.S. Geol. Surv.* Professional Paper 98K, p. 148.
- Shimer, H. W., and Shrock, R. R., 1944. Index Fossils of North America, p. 217.